19338

SEQUENCE LISTING

(1) GENERAL INFORMATION:

   (i) APPLICANT: Warmke, Jeffrey W.
              Van Der Ploeg, Leonardus

  (ii) TITLE OF INVENTION: PROCESS FOR FUNCTIONAL EXPRESSION OF THE
       PARA SODIUM CHANNEL

 (iii) NUMBER OF SEQUENCES: 7

  (iv) CORRESPONDENCE ADDRESS:
     (A) ADDRESSEE: John W. Wallen III
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     (C) CITY: Rahway
     (D) STATE: New Jersey
     (E) COUNTRY: USA
     (F) ZIP: 07065-0900

   (v) COMPUTER READABLE FORM:
     (A) MEDIUM TYPE: Floppy disk
     (B) COMPUTER: IBM PC compatible
     (C) OPERATING SYSTEM: PC-DOS/MS-DOS
     (D) SOFTWARE: PatentIn Release #1.0, Version #1.25

  (vi) CURRENT APPLICATION DATA:
     (A) APPLICATION NUMBER:
     (B) FILING DATE:
     (C) CLASSIFICATION:

 (viii) ATTORNEY/AGENT INFORMATION:
     (A) NAME: Wallen III, John W.
     (B) REGISTRATION NUMBER: 35,403
     (C) REFERENCE/DOCKET NUMBER: 19338

  (ix) TELECOMMUNICATION INFORMATION:
     (A) TELEPHONE: (908) 594-3905
     (B) TELEFAX: (908) 594-4720

(2) INFORMATION FOR SEQ ID NO:1:

   (i) SEQUENCE CHARACTERISTICS:
     (A) LENGTH: 33 base pairs
     (B) TYPE: nucleic acid
     (C) STRANDEDNESS: single
     (D) TOPOLOGY: linear

  (ii) MOLECULE TYPE: cDNA

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

GACTCTAGAC GTTGGCCGCA TAGACAATGA CAG   33

(2) INFORMATION FOR SEQ ID NO:2:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 21 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: cDNA

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

AAGAGCTCGA CGAAGGGATC G   21

(2) INFORMATION FOR SEQ ID NO:3:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 24 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: cDNA

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

TCTTCGATCC CTTCGTCGAG CTCT   24

(2) INFORMATION FOR SEQ ID NO:4:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 21 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: cDNA

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

AAAGGATCCA AATATGATGA A   21

(2) INFORMATION FOR SEQ ID NO:5:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 25 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

TTTGGATCCT TTTTCACACT CAATC   25

(2) INFORMATION FOR SEQ ID NO:6:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 32 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: single
            (D) TOPOLOGY: linear

        (ii) MOLECULE TYPE: cDNA

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

GACTCTAGAG CTAATACTCG CGTGCATCTT GG   32

(2) INFORMATION FOR SEQ ID NO:7:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 6513 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: single
            (D) TOPOLOGY: linear

        (ii) MOLECULE TYPE: cDNA

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

TCTAGACGTT GGCCGCATAG ACAATGACAG AAGATTCCGA CTCGATATCT GAGGAAGAAC   60

GCAGTTTGTT CCGTCCCTTT ACCCGCGAAT CATTGGTGCA AATCGAACAA CGCATTGCCG   120

CTGAACATGA AAAGCAGAAG GAGCTGGAAA GAAAGAGAGC CGAGGGAGAG GTGCCGCGAT   180

ATGGTCGCAA GAAAAAACAA AAAGAAATCC GATATGATGA CGAGGACGAG GATGAAGGTC   240

CACAACCGGA TCCTACACTT GAACAGGGTG TGCCAATACC TGTTCGATTG CAGGGCAGCT   300

TCCCGCCGGA ATTGGCCTCC ACTCCTCTCG AGGATATCGA TCCCTACTAC AGCAATGTAC   360

TGACATTCGT AGTTGTAAGC AAAGGAAAAG ATATTTTTCG CTTTTCTGCA TCAAAAGCAA   420

TGTGGATGCT CGATCCATTC AATCCGATAC GTCGTGTGGC CATTTACATT CTAGTGCATC   480

CATTATTTTC CCTATTCATC ATCACCACAA TTCTCGTCAA CTGCATCCTG ATGATAATGC   540

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CGACAACGCC CACGGTTGAG TCCACTGAGG TGATATTCAC CGGAATCTAC ACATTTGAAT    600

CAGCTGTTAA AGTGATGGCA CGAGGTTTCA TTTTATGCCC GTTTACGTAT CTTAGAGATG    660

CATGGAATTG GCTGGACTTC GTAGTAATAG CTTTAGCTTA TGTGACCATG GGTATAGATT    720

TAGGTAATCT AGCAGCCCTG CGAACGTTTA GGGTGCTGCG AGCGCTTAAA ACCGTAGCCA    780

TTGTGCCAGG CTTGAAGACC ATCGTCGGCG CCGTCATCGA ATCGGTGAAG AATCTGCGCG    840

ATGTGATTAT CCTGACCATG TTCTCCCTGT CGGTGTTCGC GTTGATGGGC CTACAGATCT    900

ATATGGGCGT GCTCACCGAG AAGTGCATCA AGAAGTTCCC GCTGGACGGT TCCTGGGGCA    960

ATCTGACCGA CGAGAACTGG GACTATCACA ATCGCAATAG CTCCAATTGG TATTCCGAGG    1020

ACGAGGGCAT CTCATTTCCG TTATGCGGCA ATATATCCGG TGCGGGGCAA TGCGACGACG    1080

ATTACGTGTG CCTGCAGGGG TTTGGTCCGA ATCCGAATTA TGGCTACACC AGCTTCGATT    1140

CGTTCGGATG GGCTTTCCTG TCCGCCTTCC GGCTGATGAC ACAGGACTTC TGGGAGGATC    1200

TGTACCAGCT GGTGTTGCGC GCCGCCGGAC CATGGCACAT GCTGTTCTTT ATAGTCATCA    1260

TCTTCCTAGG TTCATTCTAT CTTGTGAATT TGATTTTGGC CATTGTTGCC ATGTCGTATG    1320

ACGAATTGCA AAGGAAGGCC GAAGAAGAAG AGGCTGCCGA AGAGGAGGCG ATACGTGAAG    1380

CGGAAGAAGC TGCCGCCGCC AAAGCGGCCA AGCTGGAGGA GCGGGCCAAT GCGCAGGCTC    1440

AGGCAGCAGC GGATGCGGCT GCCGCCGAAG AGGCTGCACT GCATCCGGAA ATGGCCAAGA    1500

GTCCGACGTA TTCTTGCATC AGCTATGAGC TATTTGTTGG CGGCGAGAAG GGCAACGATG    1560

ACAACAACAA AGAGAAGATG TCCATTCGGA GCGTCGAGGT GGAGTCGGAG TCGGTGAGCG    1620

TTATACAAAG ACAACCAGCA CCTACCACAG CACACCAAGC TACCAAAGTT CGTAAAGTGA    1680

GCACGACATC CTTATCCTTA CCTGGTTCAC CGTTTAACAT ACGCAGGGGA TCACGTAGTT    1740

CTCACAAGTA CACGATACGG AACGGACGTG GCCGCTTTGG TATACCCGGT AGCGATCGTA    1800

AGCCATTGGT ATTGTCAACA TATCAGGATG CCCAGCAGCA CTTGCCCTAT GCCGACGACT    1860

CGAATGCCGT CACCCCGATG TCCGAAGAGA ATGGGGCCAT CATAGTGCCC GTGTACTATG    1920

GCAATCTAGG CTCCCGACAC TCATCGTATA CCTCGCATCA GTCCCGAATA TCGTATACCT    1980

CACATGGCGA TCTACTCGGC GGCATGGCCG TCATGGGCGT CAGCACAATG ACCAAGGAGA    2040

GCAAATTGCG CAACCGCAAC ACACGCAATC AATCAGTGGG CGCCACCAAT GGCGGCACCA    2100

CCTGTCTGGA CACCAATCAC AAGCTCGATC ATCGCGACTA CGAAATTGGC CTGGAGTGCA    2160

CGGACGAAGC TGGCAAGATT AAACATCATG ACAATCCTTT TATCGAGCCC GTCCAGACAC    2220
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ATGACGAGGA TGGGCCGACG TTCAAAGACA AGGCACTCGA AGTGATCCTC AAAGGCATCG   2400

ATGTGTTTTG TGTGTGGGAC TGTTGCTGGG TTTGGTTGAA ATTTCAGGAG TGGGTATCGC   2460

TCATCGTCTT CGATCCCTTC GTCGAGCTCT TCATCACGCT GTGCATTGTG GTCAACACGA   2520

TGTTCATGGC AATGGATCAC CACGATATGA ACAAGGAGAT GGAACGCGTG CTCAAGAGTG   2580

GCAACTATTT CTTCACCGCC ACCTTTGCCA TCGAGGCCAC CATGAAGCTA ATGGCCATGA   2640

GCCCCAAGTA CTATTTCCAG GAGGGCTGGA ACATCTTCGA CTTCATTATC GTGGCCCTAT   2700

CGCTATTGGA ACTGGGACTC GAGGGTGTCC AGGGTCTGTC CGTATTGCGT TCCTTTCGAT   2760

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TGTTCCGGGT GCTCTGCGGA GAATGGATCG AGTCCATGTG GGACTGCATG TACGTGGGCG   3060

ATGTCTCGTG CATTCCCTTC TTCTTGGCCA CCGTTGTCAT CGGCAATCTT GTGGTACTTA   3120

ACCTTTTCTT AGCCTTGCTT TTGTCCAATT TTGGCTCATC TAGCTTATCA GCGCCGACTG   3180

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AGGGGATCAA GGAGCAGACG CAACTGGAGG TGGCCATCGG GGATCGGATG GAATTCACGA   3480

TACACGGCGA CATGAAGAAC AACAAGCCGA AGAAATCCAA ATATCTAAAT AACGCAACGA   3540

TGATTGGCAA CTCAATTAAC CACCAAGACA ATAGACTGGA ACACGAGCTA AACCATAGAG   3600

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GACCATTCAA GGACGAGAGC CACAAGGGCA GCGCCGAGAC GATGGAGGGC GAGGAGAAGC   3720

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AGGAGGGCCC GCTCGACGGT GATATCATTA TTCATGCACA CGACGAGGAT ATACTCGATG   3840

AATATCCAGC TGATTGCTGC CCCGATTCGT ACTATAAGAA ATTTCCGATC TTAGCCGGTG   3900
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TGGACAGAAT ATTTACGGTT ATATTCTTCT TGGAAATGTT AATCAAGTGG TTGGCGCTCG    4140

GCTTCAAAGT GTACTTCACC AACGCGTGGT GTTGGCTCGA TTTCGTGATT GTCATGGTAT    4200

CGCTTATCAA CTTCGTTGCT TCACTTGTTG GAGCTGGTGG TATTCAAGCC TTCAAGACTA    4260

TGCGAACGTT AAGAGCACTG AGACCACTAC GTGCCATGTC CCGTATGCAG GGCATGAGGG    4320

TCGTCGTTAA TGCGCTGGTA CAAGCTATAC CGTCCATCTT CAATGTGCTA TTGGTGTGTC    4380

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GCGAGAGCGA GAACTACACG TGGGTGAATT CAGCAATGAA TTTCGATCAT GTAGGTAACG    4560

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TCGTAGTTAT TTTCAGTTCC GAATGTCTAT TAAAAATATT CGCTTTACGA TATCACTATT    5100

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GCATTAACGA CGTCTACAAC TTCAAGACCT TTGGCCAGAG CATGATCCTG CTCTTTCAGA    5460

TGTCGACGTC AGCCGGTTGG GATGGTGTAC TGGACGCCAT TATCAATGAG GAAGCATGCG    5520

ATCCACCCGA CAGCGACAAA GGCTATCCGG GCAATTGTGG TTCAGCGACC GTTGGAATAA    5580
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19338

CGTTTCTCCT CTCATACCTA GTTATAAGCT TTTTGATAGT TATTAATATG TACATTGCTG   5640

TCATTCTCGA GAACTATAGT CAGGCCACCG AGGACGTGCA AGAGGGTCTA ACCGACGACG   5700

ACTACGACAT GTACTATGAG ATCTGGCAGC AATTCGATCC GGAGGGCACC CAGTACATAC   5760

GCTATGATCA GCTGTCCGAA TTCCTGGACG TACTGGAGCC CCCGCTGCAG ATCCACAAAC   5820

CGAACAAGTA CAAGATCATA TCGATGGACA TACCCATCTG TCGCGGTGAC CTCATGTACT   5880

GCGTCGACAT CCTCGACGCC CTTACGAAAG ACTTCTTTGC GCGGAAGGGC AATCCGATAG   5940

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TCTCATCAAC GCTGTGGCGT CAGCGTGAGG AGTACTGCGC CCGGCTAATC CAGCACGCCT   6060

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GCGATGGCGG TGATCCGGAT GCCGGGGACC CGGCGCCCGA TGAAGCAACG GACGGCGATG   6180

CGCCCGCTGG TGGAGATGGT AGTGTTAACG GTACTGCAGA AGGAGCTGCC GATGCCGATG   6240

AGAGTAATGT AAATAGTCCG GGTGAGGATG CAGCGGCGGC GGCAGCAGCA GCAGCAGCAG   6300

CGGCGGCGGC GGGCACGACG ACGGCGGGAA GTCCCGGAGC GGGTAGCGCC GGGCGACAGA   6360

CCGCCGTTCT CGTGGAGAGC GACGGGTTCG TGACGAAGAA CGGCCACAAG GTGGTCATCC   6420

ACTCGCGATC GCCGAGCATC ACGTCGCGCA CGGCGGATGT CTGAGCCAGG CCTCGCCCCC   6480

CCCTCCAAGA TGCACGCGAG TATTAGCTCT AGA   6513